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10/611,950	07/03/2003	Alexis Tzannes	5550-31	5413
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Jason H. Vick Sheridan Ross, PC Suite # 1200 1560 Broadway Denver, CO 80202			EXAMINER ROSARIO, DENNIS	
			ART UNIT 2624	PAPER NUMBER
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

jvick@sheridanross.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/611,950	<b>Applicant(s)</b> TZANNES ET AL.	
	<b>Examiner</b> DENNIS ROSARIO	<b>Art Unit</b> 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2010.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-91 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-91 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Amendment***

1. The amendment was received on 12/22/10. Claims 1-91 are pending.

### ***Claim Rejections - 35 USC § 101***

2. Due to the amendment, the 101 rejection is withdrawn.

### ***Response to Arguments***

3. Applicant's arguments, see remarks, page 12, 4<sup>th</sup> paragraph, 1<sup>st</sup> sentence, filed 12/22/10, with respect to the rejection(s) of claim 19 under 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn.

However, upon further consideration, a new ground(s) of rejection is made in view of Lubin et al. (US Patent 6,075,884) in view of Peterson et al. (US Patent 6,529,631) and Park (US Patent 6,219,383) further in view of Peterson et al. (US Patent 6,529,631).

4. Applicant's arguments, see remarks, page 12, 2<sup>nd</sup> paragraph, penultimate sentence, filed 12/22/10, with respect to the rejection(s) of claim 19 under 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection via a new embodiment is made in view of Lubin et al. (US Patent 6,075,884) in view of Peterson et al. (US Patent 6,529,631) and Park (US Patent 6,219,383) further in view of Peterson et al. (US Patent 6,529,631).

Note that the rejections under Mukherjee and Hou is withdrawn for the same reasons as said page 12, 2<sup>nd</sup> paragraph, penultimate sentence

5. Applicant's arguments filed 12/22/10 have been fully considered but they are not persuasive.

Applicants state that Lubin is completely silent about the image that has been decomposed into n subbands using a two-dimensional wavelet transform. The examiner agrees and relied on a secondary teaching.

Applicants state that Lubin's parameters are not used for compression as claimed. The examiner respectfully disagrees since Lubin's parameters as shown in fig. 7:ENCODER PARAMETERS are input to an encoder 115. Thus the encoder parameters are for compression since the encoder is understood by one of ordinary skill in the art of video compression to compress video.

***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 21 and 57 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 21 recites the limitation "the compression parameter module" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim 57 is rejected the same as claim 21. Thus, argument presented in claim 21 is equally applicable to claim 57.

***Claim Rejections - 35 USC § 103***

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8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-6,8,12-14,17-24,26,30-32,35-42,44,48-50,53-60,62,66-68,71-78,80,84-86 and 89-91 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lubin et al. (US Patent 6,075,884) in view of Peterson et al. (US Patent 6,529,631) and Park (US Patent 6,219,383) further in view of Peterson et al. (US Patent 6,529,631).

Regarding claim 19, Lubin teaches an image compression method comprising:

a) receiving, by a compression module (fig. 4:115), a first image (fig. 4:405) and memory, that has been decomposed (not taught) into N subbands (not taught) using a 2-dimensional wavelet (not taught) transform (corresponding to "transform coefficients" in col. 7, lines 4-7 and represented in fig. 4 414), in a sequence of images (or video) and

b) compressing (fig. 4:115) the image (405) at least based on one or more parameters (fig. 4:115 that includes parameters that are to be adjusted); and

c) iteratively (via fig. 4:112 that is used in an "iterative fashion" in col. 7, lines 65-67) adapting the one or more parameters ("adjusts the encoder parameters" in col. 7, lines 61-65 wherein adjusts means adapts) used (since the parameters that were used during encoding of 115 are being adjusted as represented in fig. 4 as 412) on the first image (fig. 7:ORIGINAL VIDEO) for compression of a next image (intended use and

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not clearly performed and corresponding to “the controller adjusts the encoder parameters to...produce an encoded bitstream” in col. 7, lines 22-27), wherein the one or more parameters (said encoder parameters in adjusted form and in to be adjusted form) include (broadly interpreted as pre-processing) at least one truncation parameter (via the pre-processing of fig. 7:720 that reduces an error of fig. 7:112 during training wherein said 112 of fig. 7 is placed into fig. 4:112 after training that reduces the training error of 112).

Lubin does not teach the 2-dimensional wavelet transform and does not clearly teach the iteratively and adapting together of the claimed "iteratively adapting."

Peterson teaches compressing using “wavelet transforms” in col. 5, lines 48-52 within fig. 1:104 which is similar to Lubin’s fig. 4:115 as an option instead of using a DCT transform.

It would have been obvious at the time the invention was made to one of ordinary skill in the art to insert a wavelet transform of Peterson within Lubin’s encoder of fig. 4:115. The determination of obviousness is predicated upon the following findings: One skilled in the art would have been motivated to modify Lubin in this manner because/in order to provide an encoder with a wavelet transform that provides “versatilities [that] are desirable in image and video coding applications (Park, col. 1, lines 12-20)”. Furthermore, the prior art collectively includes each element claimed (though not all in the same reference), and one of ordinary skill in the art could have combined the elements in the manner explained above using known engineering design, interface and/or programming techniques, without changing a “fundamental”

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operating principle of Lubin, while the teaching of Peterson continues to perform the same function as originally taught prior to being combined, in order to produce the repeatable and predictable result of providing a transform that has desirable properties for video compression as described by Park. It is for at least the aforementioned reasons that the examiner has reached a conclusion of obviousness with respect to the claim in question.

However, the combination does not teach the "iteratively" and "adapting" being used together of the claimed "iteratively adapting."

Peterson teaches "coding of the image can be iteratively adjusted" in the abstract.

It would have been obvious at the time the invention was made to one of ordinary skill in the art to combine together Lubin's teaching of coding in an iterative fashion and adjusting the encoding parameters so that the adjusting of the encoding parameters are done in an iterative fashion in light of Peterson's teaching of iteratively adjusting coding via fig. 7. The determination of obviousness is predicated upon the following findings: One skilled in the art would have been motivated to modify Lubin in this manner because/in order to steer coding of images that is "useful" in col. 1, line 63-col. 2, line 4. Furthermore, the prior art collectively includes each element claimed (though not all in the same reference), and one of ordinary skill in the art could have combined the elements in the manner explained above using known engineering design, interface and/or programming techniques, without changing a "fundamental" operating principle of Lubin, while the teaching of Peterson continues to perform the same function as

originally taught prior to being combined, in order to produce the repeatable and predictable result of providing a useful steering of coding of images. It is for at least the aforementioned reasons that the examiner has reached a conclusion of obviousness with respect to the claim in question.

Regarding claim 20, Lubin teaches the method of claim 19, wherein the next image is compressed using the one or more adapted parameters (corresponding to “the controller adjusts the encoder parameters to...produce an encoded bitstream” in col. 7, lines 22-27 wherein the bitstream includes the next image).

Regarding claim 21, Lubin teaches the method of claim 19, wherein the compression parameter module (fig. 4:112) adapts (as represented in fig. 4 as 412) the one or more parameters (of fig. 4:115) based on a metric (from fig. 4:111).

Regarding claim 22, Lubin teaches the method of claim 21, wherein the metric is at least based on one of image file size and image quality (since figure 4 is called QME which stands for quality-metric-based encoding.).

Regarding claim 23, Lubin teaches the method of claim 22, wherein the metric governing image quality is based on one or more of:

- a) peak signal to noise ratio,
- b) mean squared error,
- c) human visual system models and
- d) operator inspection (or “human viewer” in col. 7, line 34).

A rejection of claim 24 is moot based on the “one of” limitation in claim 22.



Regarding claim 26 Lubin teaches the method of claim 21, wherein the metric is based on a difference (or “differences” in col. 5, line 20) between a target image quality (“predicted ratings” in col. 5, line 20) and an achieved image quality (“ratings observed” in col. 5, line 20 where said ratings includes “quality levels” in col. 5, line 24) .

Regarding claim 30, Lubin teaches the method of claim 19, wherein the first image and the next image are one or more of:

- a) a sequence of images (or ORIGINAL VIDEO as shown in fig. 4),
- b) time-series data, and
- c) 3-dimensional data sets.

Regarding claim 31, Lubin teaches the method of claim 19, further comprising iteratively (“iterations” in col. 7, line 44) controlling the one or more parameters.

Claim 32 is rejected the same as claim 31. Thus, argument similar to that presented above for claim 31 is equally applicable to claim 32.

Regarding claim 35, Lubin teaches the method of claim 19, further comprising:

- a) selecting a quantization (“selection of a quantization” in col. 9, line 52).

Claims 1-6,8,12-14,17,18 are rejected the same as claims 19-24,26,30-32 and 35,19. Thus, argument similar to that presented above for claims 19-24,26,30-32 and 35,19 of a method is equally applicable to claims 1-6,8,12-14,17,18, respectively, of a system.

Claims 36-42,44,48-50,53,54 are rejected the same as claims 19,19-24,26,30-32 and 35,19. Thus, argument similar to that presented above for claims 19,19-24,26,30-32 and 35,19 of a system is equally applicable to claims 36-42,44,48-50,53,54 of a system.

Claims 55-60,62,66-68,71-72 are rejected the same as claims 19-24,26,30-32 and 35,19. Thus, argument similar to that presented above for claims 19-24,26,30-32 and 35,19 of a system is equally applicable to claims 55-60,62,66-68,71-72 of a protocol.

Claims 73-78,80,84-86,89,90,91 are rejected the same as claims 19-24,26,30-32 and 35,19,19. Thus, argument similar to that presented above for claims 19-24,26,30-32 and 35,19,19 of a system is equally applicable to claims 73-78,80,84-86,89,90,91 of a media.

10. Claims 1,11,16,19,29,34,37,52,55,70,73 and 88 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lubin et al. (US Patent 6,075,884) in view of Peterson et al. (US Patent 6,529,631) and Park (US Patent 6,219,383) further in view of Peterson et al. (US Patent 6,529,631) and Joshi et al. (US Patent 6,668,090).

Regarding claim 19, Lubin teaches an image compression method comprising:

a) receiving, by a compression module (fig. 4:115), a first image (fig. 4:405) and memory, that has been decomposed (not taught) into N subbands (not taught) using a 2-dimensional wavelet (not taught) transform (corresponding to "transform coefficients" in col. 7, lines 4-7 and represented in fig. 4 414), in a sequence of images (or video) and

b) compressing (fig. 4:115) the image (405) at least based on one or more parameters (fig. 4:115 that includes parameters that are to be adjusted); and

c) iteratively (via fig. 4:112 that is used in an “iterative fashion” in col. 7, lines 65-67) adapting the one or more parameters (“adjusts the encoder parameters” in col. 7, lines 61-65 wherein adjusts means adapts) used (since the parameters that were used during encoding of 115 are being adjusted as represented in fig. 4 as 412) on the first image (fig. 7:ORIGINAL VIDEO) for compression of a next image (intended use and not clearly performed and corresponding to “the controller adjusts the encoder parameters to...produce an encoded bitstream” in col. 7, lines 22-27), wherein the one or more parameters (said encoder parameters in adjusted form and in to be adjusted form) include at least one truncation parameter (not taught).

Lubin does not teach the 2-dimensional wavelet transform and does not clearly teach the iteratively and adapting together of the claimed "iteratively adapting" and the truncation parameter.

Peterson teaches compressing using “wavelet transforms” in col. 5, lines 48-52 within fig. 1:104 which is similar to Lubin’s fig. 4:115 as an option instead of using a DCT transform.

It would have been obvious at the time the invention was made to one of ordinary skill in the art to insert a wavelet transform of Peterson within Lubin’s encoder of fig. 4:115. The determination of obviousness is predicated upon the following findings: One skilled in the art would have been motivated to modify Lubin in this manner because/in order to provide an encoder with a wavelet transform that provides “versatilities [that] are desirable in image and video coding applications (Park, col. 1, lines 12-20)”. Furthermore, the prior art collectively includes each element claimed

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(though not all in the same reference), and one of ordinary skill in the art could have combined the elements in the manner explained above using known engineering design, interface and/or programming techniques, without changing a "fundamental" operating principle of Lubin, while the teaching of Peterson continues to perform the same function as originally taught prior to being combined, in order to produce the repeatable and predictable result of providing a transform that has desirable properties for video compression as described by Park. It is for at least the aforementioned reasons that the examiner has reached a conclusion of obviousness with respect to the claim in question.

However, the combination does not teach the "iteratively" and "adapting" being used together of the claimed "iteratively adapting."

Peterson teaches "coding of the image can be iteratively adjusted" in the abstract.

It would have been obvious at the time the invention was made to one of ordinary skill in the art to combine together Lubin's teaching of coding in an iterative fashion and adjusting the encoding parameters so that the adjusting of the encoding parameters are done in an iterative fashion in light of Peterson's teaching of iteratively adjusting coding via fig. 7. The determination of obviousness is predicated upon the following findings: One skilled in the art would have been motivated to modify Lubin in this manner because/in order to steer coding of images that is "useful" in col. 1, line 63-col. 2, line 4. Furthermore, the prior art collectively includes each element claimed (though not all in the same reference), and one of ordinary skill in the art could have combined the

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elements in the manner explained above using known engineering design, interface and/or programming techniques, without changing a “fundamental” operating principle of Lubin, while the teaching of Peterson continues to perform the same function as originally taught prior to being combined, in order to produce the repeatable and predictable result of providing a useful steering of coding of images. It is for at least the aforementioned reasons that the examiner has reached a conclusion of obviousness with respect to the claim in question.

The combination does not teach the truncation parameter.

Joshi teaches truncation via fig. 9:909 and that a “viewing distance” is a “parameter” in col. 7, lines 3-12 and the distance is used to “initialize” “truncation” col. 11, lines 33-42. Thus, the viewing distance parameter that initializes truncation broadly corresponds to the claimed truncation parameter.

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify Lubin’s fig. 4:112 of a bit-rate to include the viewing distance truncation rate control parameter of Joshi. The determination of obviousness is predicated upon the following findings: One skilled in the art would have been motivated to modify Lubin in this manner because/in order to obtain a rate-control that uses truncation that is used to maximize “visual quality” (Joshi, col. 3, lines 56-61). Furthermore, the prior art collectively includes each element claimed (though not all in the same reference), and one of ordinary skill in the art could have combined the elements in the manner explained above using known engineering design, interface and/or programming techniques, without changing a “fundamental” operating principle

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of Lubin, while the teaching of Joshi continues to perform the same function as originally taught prior to being combined, in order to produce the repeatable and predictable result of providing a rate-control through truncation to obtain a maximum visual quality. It is for at least the aforementioned reasons that the examiner has reached a conclusion of obviousness with respect to the claim in question.

Regarding claim 29, Joshi teaches the method of claim 19, wherein the at least one truncation parameter (said viewing distance parameter) is one or more of a specific truncation point (fig. 9:909: "truncation point") and a truncation decision.

Regarding claim 34, Joshi teaches the method of claim 19, further comprising selecting a truncation (corresponding to "the truncation point...can be chosen" in col. 11, lines 37-41).

Claims 1,11,16,37,52,55,70,73 and 88 are rejected the same as claims 19,29 and 34. Thus, argument presented in claims 19,29 and 34 is equally applicable to claims 1,11 and 16.

Claims 37,52,55,70,73 and 88 are rejected the same as claims 19 and 34. Thus, argument presented in claims 19 and 34 is equally applicable to claims 37,52,55,70,73 and 88.

11. Claims 7,25,43,61 and 79 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lubin et al. (US Patent 6,075,884) in view of Peterson et al. (US Patent 6,529,631) and Park (US Patent 6,219,383) further in view of Peterson et al. (US Patent 6,529,631), as applied to claims 1-6,8,12-14,17-24,26,30-32,35-41,42,44,48-

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50,53-60,62,66-68,71-78,80,84-86 and 89-91 above, further in view of Dyas et al. (US Patent 6,504,494).

Regarding claim 25, the combination does not teach the metric is based on a difference between a target image file size and an achieved image file size.

Dyas teaches a metric (or “quantization matrix scaling factor is a measure” in col. 4, lines 55-57 that is shown in fig. 6:612 as NEW QUANTIZATION MATRIX SCALING FACTOR VALUE) is based on a difference between a target image file size and an achieved image file size (fig. 6:610).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify Lubin’s fig. 4:111 corresponding to a quality metric generator of fig. 3:330 to generate the quantization matrix scaling factor via the method of Dyas’s fig. 6. The determination of obviousness is predicated upon the following findings: One skilled in the art would have been motivated to modify Lubin in this manner because/in order to “control” (Dyas, col. 4, lines 47,48) compression via the quantization matrix scaling factor. Furthermore, the prior art collectively includes each element claimed (though not all in the same reference), and one of ordinary skill in the art could have combined the elements in the manner explained above using known engineering design, interface and/or programming techniques, without changing a “fundamental” operating principle of Lubin, while the teaching of Dyas continues to perform the same function as originally taught prior to being combined, in order to produce the repeatable and predictable result of controlling compression. It is for at least the aforementioned

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reasons that the examiner has reached a conclusion of obviousness with respect to the claim in question.

Claims 7,43,61 and 79 are rejected the same as claim 25. Thus, argument presented in claim 25 is equally applicable to claims 7,43,61 and 79.

12. Claims 9,10,27,28,45,46,63,64,81 and 82 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lubin et al. (US Patent 6,075,884) in view of Peterson et al. (US Patent 6,529,631) and Park (US Patent 6,219,383) further in view of Peterson et al. (US Patent 6,529,631), as applied to claims 1-6,8,12-14,17-24,26,30-32,35-41,42,44,48-50,53-60,62,66-68,71-78,80,84-86 and 89-91 above, further in view of Peterson (US Patent 6,529,631) and Park (US Patent 6,219,383).

Regarding claim 27, Lubin of the combination does not teach quantization parameters.

Peterson of the combination teaches "parameters may include encoder quantization scale" in col. 3, last line to col. 4, line 2.

Park of the combination teaches a quantizer in fig. 4:460.

It would have been obvious at the time the invention was made to one of ordinary skill in the art to include the quantization scale with Park's quantizer. The determination of obviousness is predicated upon the following findings: One skilled in the art would have been motivated to modify Park in this manner because/in order to "produce high fidelity video" (Peterson, col. 1, lines 51-55). Furthermore, the prior art collectively includes each element claimed (though not all in the same reference), and one of ordinary skill in the art could have combined the elements in the manner explained



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above using known engineering design, interface and/or programming techniques, without changing a “fundamental” operating principle of Park, while the teaching of Peterson continues to perform the same function as originally taught prior to being combined, in order to produce the repeatable and predictable result of producing high fidelity video. It is for at least the aforementioned reasons that the examiner has reached a conclusion of obviousness with respect to the claim in question.

Regarding claim 28, Peterson of the combination teaches the method of claim 27, wherein the quantization parameters are one or more of binwidths and quantization decisions (corresponding to fig. 4:420:NO branch).

Claims 9,10,45,46,63,64,81 and 82 are rejected the same as claims 27 and 28. Thus, argument presented in claims 27 and 28 is equally applicable to claims 9,10,45,46,63,64,81 and 82.

13. Claims 15,33,51,69 and 87 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lubin et al. (US Patent 6,075,884) in view of Peterson et al. (US Patent 6,529,631) and Park (US Patent 6,219,383) further in view of Peterson et al. (US Patent 6,529,631), as applied to claims 1-6,8,12-14,17-24,26,30-32,35-41,42,44,48-50,53-60,62,66-68,71-78,80,84-86 and 89-91 above, further in view of Persiantsev et al. (US Patent 6,307,971).

Regarding claim 33, the combination does not teach the claimed selecting a binwidth.

Persintsev teaches the claimed selecting a binwidth as “selects a set of ‘bin widths’ ” in col. 14, lines 26-28.

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify Park's fig. 4 with Persintsev's fig. 6. The determination of obviousness is predicated upon the following findings: One skilled in the art would have been motivated to modify Park in this manner because/in order to obtain a compressor that "reduces quantization error" in col. 14, lines 32-34. Furthermore, the prior art collectively includes each element claimed (though not all in the same reference), and one of ordinary skill in the art could have combined the elements in the manner explained above using known engineering design, interface and/or programming techniques, without changing a "fundamental" operating principle of Park, while the teaching of Persintsev continues to perform the same function as originally taught prior to being combined, in order to produce the repeatable and predictable result of producing high fidelity video. It is for at least the aforementioned reasons that the examiner has reached a conclusion of obviousness with respect to the claim in question.

Claims 15,51,69 and 87 are rejected the same as claim 33. Thus, argument presented in claim 33 is equally applicable to claims 15,51,69 and 87.

14. Claims 47,65 and 83 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lubin et al. (US Patent 6,075,884) in view of Peterson et al. (US Patent 6,529,631) and Park (US Patent 6,219,383) further in view of Peterson et al. (US Patent 6,529,631), as applied to claims 1-6,8,12-14,17-24,26,30-32,35-41,42,44,48-50,53-60,62,66-68,71-78,80,84-86 and 89-91 above, further in view of Peterson (US Patent 6,529,631) and Park (US Patent 6,219,383), as applied to claims

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9,10,27,28,45,46,63,64,81 and 82 above, further in view of Joshi et al. (US Patent 6,668,090) as applied to claims 1,11,16,19,29,34,37,52,55,70,73 and 88 above.

Claims 47,65 and 83 are rejected the same as claim 29. Thus, argument presented in claim 29 is equally applicable to claims 47,65 and 83.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DENNIS ROSARIO whose telephone number is (571)272-7397. The examiner can normally be reached on 9-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella can be reached on (571)272-7778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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